Hunters Point Shipyard Historical Radiological Assessment Fact Sheet No. 2

May 2003

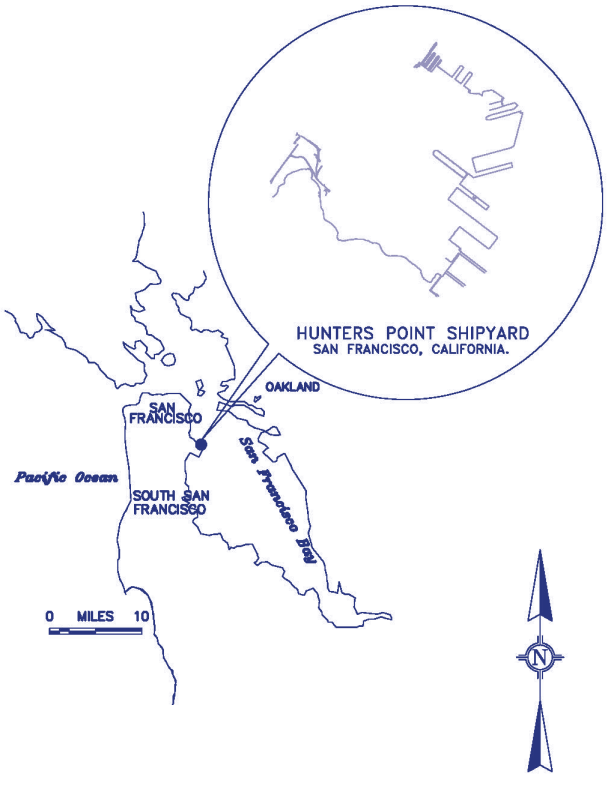
The Navy has made a commitment to keep the local community, Hunters Point Shipyard tenants, and federal, state and local regulators informed during preparation of the Historical Radiological Assessment.

INTRODUCTION

The Hunters Point Shipyard (HPS) Historical Radiological Assessment (HRA) is being prepared by the U.S. Navy as part of its Installation Restoration Program. This fact sheet is the second in an ongoing series to update the community on the progress made in creating a Final Draft HRA. Information provided in this issue was recently obtained through ongoing historical research.

The HRA documents historical research and previous investigations of radiological operations at HPS. The HRA report will provide:

1. Baseline documentation for determining the remaining presence and extent of radioactive materials.
2. Baseline for assessing past and ongoing radiological investigations.
3. Recommendations for further action.



BACKGROUND

While preparing responses to public and regulatory comments on the March 2002 Draft HRA, the Navy's Radiological Affairs Support Office (RASO) discovered more documents about radiological operations at HPS. Also, radiological surveys performed at buildings and structures have led to the identification of sites that require further action. Further, the Navy is conducting in-depth interviews with people who have knowledge about past radiological operations at HPS.

All of these steps will help to ensure that the Navy meets its goal of producing an accurate and comprehensive HRA.

"We heard what the community was saying and we are acting on it. The Navy is now in the process of conducting a very thorough review of historical documents. This research will tell us where else we need to look. But that's not all – we are interviewing former employees of the shipyard to find out what they remember. All of these efforts will help the Navy develop a very comprehensive HRA."

Keith Forman, HPS Base Realignment and Closure Environmental Coordinator

HRA PROGRESS

Historical Research – The Navy is conducting a detailed review of historic records from as many sources as possible. A number of archives and other locations where the Navy maintains information from past operations and activities have been identified and included in the record search.

Interviews – The Navy placed advertisements in local newspapers and has received over 200 responses. Responses

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were received from a variety of individuals, including:

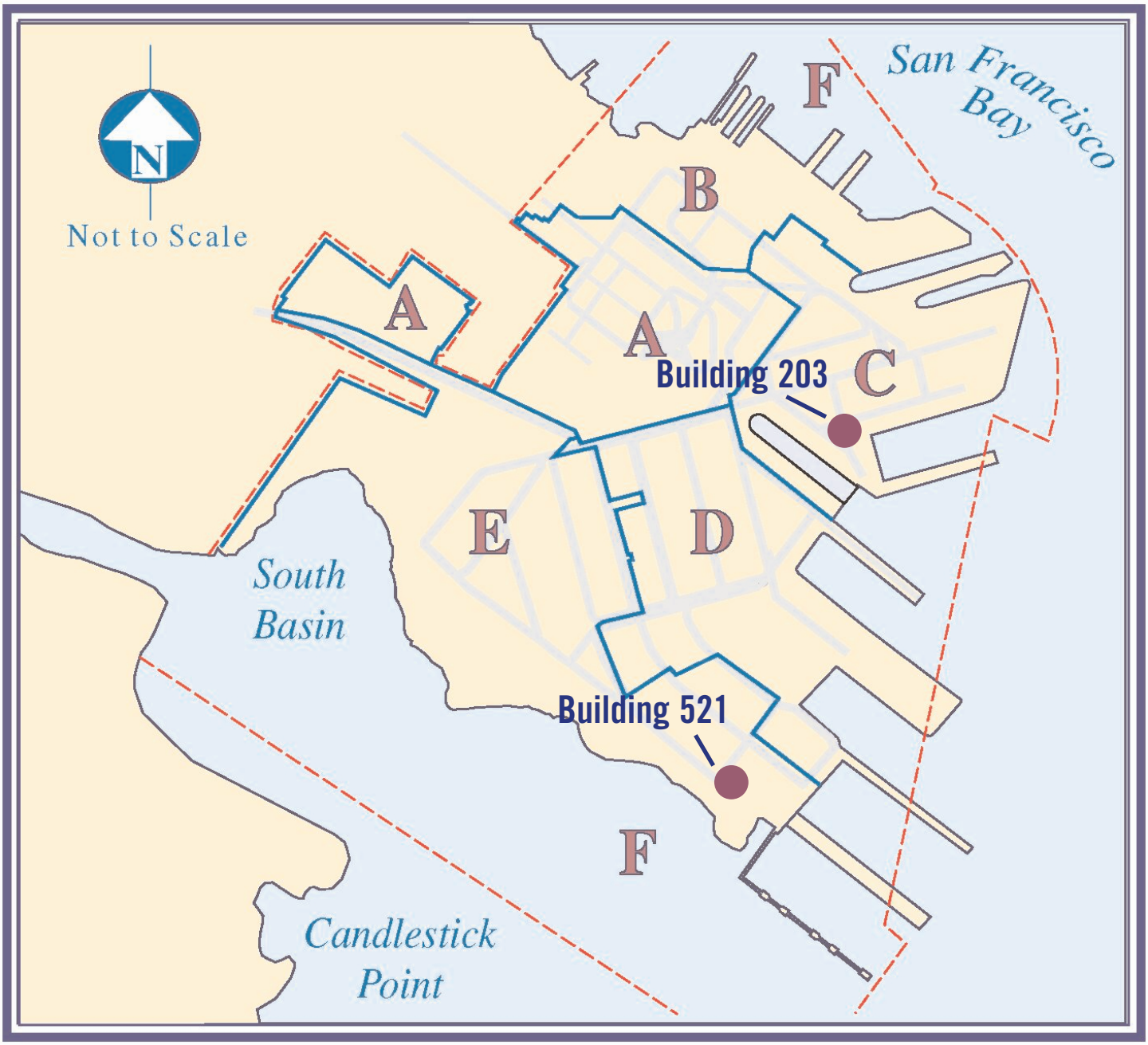
- former employees of National Radiological Defense Laboratory, HPS, Triple A Machine Shop, and Mare Island Naval Shipyard;
- former active duty personnel;
- former contractors; and
- family members and friends of former employees.

Respondents are being screened by telephone and e-mail initially to evaluate whether or not information that they have is relevant to the HRA. To date, 161 respondents have been identified as potential interviewees. Telephone interviews began on February 19, 2003. As a result, 20 additional potential interviewees have been identified.

HRA Schedule – The Final Draft HRA is currently scheduled for release to the public and regulators in August 2003.

NEWLY DISCOVERED INFORMATION

As a result of the historical research that is under way, new areas have been identified that require further evaluation. In HRA Fact Sheet No. 1, information about Buildings D-19, D-20 and D-21, used temporarily by the former Naval Radiological Defense Laboratory's Material and Accounts Division, was presented. Since the last fact sheet was



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released, RASO has learned that these buildings were used in an administrative and general storage capacity only. Below is newly discovered information from 1947 regarding burning of fuel at Hunters Point Shipyard that contained trace amounts of radioactivity. This fuel burning did not result in a harmful impact to the surrounding community or environment and there is no residual risk associated with this event. All of the details will be provided in the Final Draft HRA.

Operation Crossroads – Operation Crossroads, an atomic test conducted in the summer of 1946 at Bikini Atoll in the South Pacific, was fully supported by all services of the Department of Defense. Two weapons were detonated — one as an air burst (Shot Able) and one as an underwater burst (Shot Baker). About 180 Navy ships were involved as either targets or support ships, ranging from submarines to aircraft carriers. The Shot Baker detonation exposed the vessels to radioactive materials. The specific radioactive elements released were plutonium-239, cesium-137 and strontium-90 (fission products from the detonation). Eighteen target and observation vessels of Operation Crossroads were decontaminated at Hunters Point Shipyard (HPS).

Ship Decontamination – Initial decontamination efforts were conducted at the test site so that target and support ships could return safely to the continental United States. The ships were returned to HPS (known at the time as San Francisco Naval Shipyard) for monitoring because it could accommodate the ships and many of the country's top radiological experts were in the immediate vicinity.

In 1946, the Radiation Laboratory (also known as the Radiation Safety Section) was formally established at HPS to come up with the best methods to decontaminate the ships and to study the effects of radioactivity. The Radiation Laboratory worked with top scientists from the Manhattan Project, the Atomic Energy Commission and local universities to establish the radiological controls and decontamination procedures for use on ships from Operation Crossroads.

Fuel Burning Activities and Safety Measures – The Radiation Laboratory assessed the types and levels of radiation on the target ships that were towed back to HPS from Operation Crossroads. Fuel oil in three ships was found to contain trace amounts of plutonium-239 and fission products (cesium-137 and strontium-90; see glossary on page four). This fuel oil was burned at HPS in accordance with safety criteria established by the Radiation Laboratory.

Prior to burning the fuel oil, extensive tests were conducted to determine the levels of radiation. The levels were considered low enough to allow the fuel to be removed from the ships and burned in the shore boilers at HPS. Some of the fuel was used to power the shipyard. The fuel was only burned when it was authorized by the Bureau of Ships. An estimated total of 610,000 gallons of fuel from the USS Independence, USS Crittenden, and USS Gasconade was burned at HPS intermittently from April through August 1947.

★★★NOTICE★★★

The Navy is still accepting interviews from individuals with information on radiological operations at HPS. The interview can be conducted in person, over the telephone, or by electronic mail. To schedule an interview, please contact Mr. Daryl DeLong of New World Technology by phone at 1-800-443-7164, or by electronic mail at daryld@newworld.org. It is important that the Navy receive as much information as possible Information collected will only be used for preparation of the HRA for HPS. No information will be released to the public without the written authorization of the interviewee.

Fuel Burning Procedures – The fuel was removed from the ships, treated to remove any moisture and burned in boilers at one or both HPS power plants (Buildings 203 and 521). The Navy's Bureau of Ships provided specific guidance to HPS before the fuel was burned. The guidance included special precautions for operation of the boilers and sampling of boiler soot and flue gasses for residual radioactivity. These procedures were designed to minimize radiological impacts to the boilers and smoke stacks, ensure that power plant workers were not exposed, and to minimize the localized accumulation of radiation. After the burning, analyses were conducted to ensure that safety measures were effective.

WHAT'S BEING DONE NOW

The Navy's evaluation of the information and the fuel burning processes indicate that it did not result in a harmful impact to the surrounding community or environment. Furthermore, there is no residual risk associated with this event. The Navy is conducting in-depth research of all radiological records and will continue assessing any potential impacts. RASO is continuing to review documents obtained from archival research and conducting a comparative analysis of the information found to date.

The Navy is also in the process of conducting the Phase V Radiological Investigation. This involves surveying and sampling areas on HPS for isotopes of concern. Isotopes

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of concern for this project include cesium-137 and strontium-90, fission products from Operation Crossroads ships, and americium-241, which is an easily identifiable "decay product" of atomic weapon fuel.

Glossary and Definitions*

** Note – The definitions in this box pertain specifically to the information contained in this fact sheet.*

AEC	Atomic Energy Commission
Americium-241	Am-241 is an easily identifiable "decay product" of atomic weapon fuel
Cesium- 137	Cs-137 is a fission product from atomic weapon detonation
HPS	Hunters Point Shipyard
HRA	Historical Radiological Assessment
Plutonium-239	Pu-239 is used to construct atomic weapons
RASO	the Navy's Radiological Affairs Support Office
Strontium-90	Sr-90 is a fission product from atomic weapon detonation

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FOR FURTHER INFORMATION CONTACT:

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WHAT'S NEXT

The Navy is committed to preparing an accurate and comprehensive HRA. This requires thorough research and analysis of historical documents and personal interviews with those who can assist the Navy. The Navy is continuing to conduct radiological surveys, investigations and cleanup actions at HPS. These two processes — conducting research into the past activities while currently completing investigations and surveys on base — have become interrelated as the research may define where to investigate and the investigations may lead to new areas of research.

The Navy will investigate any site where radiological operations may have been performed or radioactive material may have been stored or disposed. We will ensure that today's standards established by the United States Environmental Protection Agency and the State of California's Department of Health Services are met or exceeded.

INFORMATION REPOSITORIES

The Navy maintains two Information Repositories for Hunters Point Shipyard that contain project documents and other reference materials. The Main Library in downtown San Francisco contains a nearly complete record of all the documents related to the cleanup of Hunters Point Shipyard. The Bayview / Anna E. Waden Branch Library contains a smaller collection of documents and copies of the major investigation reports for each parcel as well as documents related to the Historical Radiological Assessment.

The Navy encourages you to visit the libraries and review the documents prepared for Hunters Point Shipyard to gain a more complete understanding of the cleanup activities. Addresses for the two Information Repository locations are:

City of San Francisco Main Library
Science, Technical, and Government Documents Room
100 Larkin Street
San Francisco, CA 94102
415-557-4500 x5075

Bayview / Anna E. Waden Branch Library
5075 Third Street
San Francisco, CA 94124
415-715-4100

WEBSITE:

http://www.efdsw.navfac.navy.mil/environmental/hunterspoint.htm